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## **PATENT ABSTRACTS OF JAPAN**

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### **(54) FATS AND OILS COMPOSITION**

#### **(57)Abstract:**

**PURPOSE:** To obtain a fats and oils composition, consisting of natural palm oils having a specific fatty acid composition and natural high-oleic vegetable oils in a specified proportion with suppressed rise in acid value of fats and oils and whitening by crystals thereof and suitable as frying, spraying fats and oils, etc.

**CONSTITUTION:** A fats and oils composition, consisting of (A) 40W95% medium- melting fraction in natural palm oil with  $\leq 46$  iodine value and  $\leq 3.5\%$  diglyceride content and (B) 20W60% natural high-oleic vegetable oils with 76W95 iodine value and having 3W11% polyunsaturated fatty acid content higher than diene fatty acids in constituent fatty acids in fatty acids and mild flavor or taste without hardened butter odor, strong tastiness and excellent oxidation stability of the fats and oils with the following solid fat contents.  $\geq 30\%$  at  $10^{\circ}\text{C}$ ,  $\geq 10\%$  at  $20^{\circ}\text{C}$  and  $\leq 10\%$  at  $30^{\circ}\text{C}$ .

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### **LEGAL STATUS**

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## CLAIMS

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(57) [Claim(s)]

[Claim 1] The fats-and-oils constituent to which the polyunsaturated fatty acid more than the diene fatty acid in 42-75, and a composition fatty acid is characterized [ an iodine value / 10 degrees C ] by being 10% or less by solid-state fat content by 30 degrees C 10% or more at 20 degrees C 30% or more 3 to 11% by a diglyceride content consisting of 40 - 80% of 3.5% or less of melting point fractions in natural palm oil, and 60 - 20% of natural highness OREIKKU vegetable oil of iodine values 76-95 by 46 or less iodine value.

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## DETAILED DESCRIPTION

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[Detailed Description of the Invention]

[Industrial Application]

Especially this invention relates to the fats-and-oils constituent suitable for the fats and oils for flies, the fats and oils for sprays, etc.

[Description of the Prior Art]

There is a thing given in JP,61-44120,B as the fats and oils for flies which used natural palm oil, and fats and oils for sprays. Fats and oils given [ this ] in an official report are 35 or less iodine value and the natural palm oil fractionation oil of 35 degrees C or less of melting points which have specific fatty acid composition. this thing -- color tone fitness and flavor -- it has the features, like it is frank, and feels refreshed and there is no hardening smell, but on the other hand the crystal of fats and oils was what has the physical properties of the hard butter style, and has the problem of oxidization elevation distributing early at fly epidermis, coming out, and whitening on the occasion of the use as a fly oil or a spray oil

Therefore, even if it uses the purpose of this invention for the fats and oils for flies, the fats and oils for sprays, etc., it is to offer the fats-and-oils constituent with which whitening by acid-number elevation of fats and oils and the crystal of fats and oils was suppressed.

[The means for solving a technical problem]

By this invention, it consists of 40 - 80% of melting point fractions in [ of 46 or less iodine value ] natural palm oil, and 60 - 20% of natural highness OREIKKU vegetable oil of iodine values 76-95, and an iodine value offers the polyunsaturated fatty acid more than the diene fatty acid in 42-75, and a composition fatty acid / 3 - 11% and solid-state fat content ] the fats-and-oils constituent characterized by being 10% or less at 10% or more and 30 degrees C at 30% or more

and 20 degrees C by 10 degrees C. Therefore, the above-mentioned purpose is attained.

The fats-and-oils constituent of this invention is explained in full detail below.

The melting point fraction in natural palm oil which is the first component of the fats-and-oils constituent of this invention is 3% or less of thing preferably 3.5% or less of diglyceride contents in 46 or less iodine value. If a color tone and flavor will become bad, stability will also get worse, if the iodine value of the melting point fraction in natural palm oil exceeds 46, and a diglyceride content exceeds 3.5%, the diglyceride of palm oil becomes [ unlike the diglyceride of a liquefied oil, / since there is much saturation acid / hydrolysis or a transition reaction ] easy to occur and is not desirable.

Furthermore, the above-mentioned melting point fraction in natural palm oil is 40 - 95% among the fats-and-oils constituent of this invention. A result from which it is not desirable, and acid-number elevation is remarkable when it exceeds 80%, a whitening phenomenon becomes easy to arise as a fly oil, and only what has not good flavor is obtained since it comes to cause a sugar crying phenomenon when the stability of a fats-and-oils constituent becomes bad, for example, a doughnut is lifted at less than 40% is brought, and it is a book.

Moreover, the iodine value of the natural highness OREIKKU vegetable oil which is the second component of the fats-and-oils constituent of this invention is vegetable oil of 76-95. That to which an iodine value exceeds 95 among these natural highness OREIKKU vegetable oil has stability and bad flavor, and an iodine value has little acid-number elevation depressor effect less than 76.

Furthermore, it is bad unstable and the inside of the fats-and-oils constituent of this invention and the above-mentioned natural highness OREIKKU vegetable oil are a book, when it is 60 - 20%, and the whitening phenomenon like the above arises in a fats-and-oils constituent at less than 20%, and there is little acid-number depressor effect and it exceeds 60%.

As the above-mentioned natural highness OREIKKU vegetable oil used for the fats-and-oils constituent of this invention, high OREIKKU sunflower oil, high OREIKKU safflower oil, the high OREIKKU rapeseed oil, etc. are desirable, and especially high OREIKKU sunflower oil is desirable.

the fats-and-oils constituent of this invention -- from the first component of the above, and the second component -- becoming -- moreover -- as a whole -- for an iodine value, the polyunsaturated fatty acid more than the diene fatty acid in 42-75, and a composition fatty acid is [ solid-state fat content ] 10% or less of thing at 30 degrees C 10% or more in 20 degrees C 30% or more by 10 degrees C 3 to 11% Therefore, the fats-and-oils constituent of this invention adjusts and blends the second component for a start so that an iodine value, a multi-impossible sum fatty acid, and solid-state fat content may go into this range.

In the fats-and-oils constituent of this invention, if an iodine value is [ acid-number elevation depressor effect ] few bad insipid by less than 42 and an iodine value exceeds 75, icing nature will be poor and it will be bad unstable.

Moreover, among the composition fatty acid of the fats-and-oils constituent of this invention, a desirable thing is not made on flavor as the polyunsaturated fatty acid more than a diene fatty acid is less than 3%. Moreover, stability will be worsened if it exceeds 11%.

Furthermore, a \*\*\*\* injury becomes bad if it is not adjusted so that the solid-state fat content of the fats-and-oils constituent of this invention may become at 30% or more and 20 degrees C and may become 10% or less at 30 degrees C 10% or more by 10 degrees C.

Since hardness is given to a fats-and-oils constituent, this fats-and-oils constituent can be made to contain the portion or all the hydrogenated fats and oils of 50 degrees C or more of melting

points 50% or less in the fats-and-oils constituent of this invention. If the loadings of these fats and oils exceed 5%, a hardening smell comes out, it becomes hard too much, and stability gets worse and is not desirable, either.

It is desirable for the hardened oil of animal oil, such as vegetable oil, such as rapeseed oil, soybean oil, a cone oil, and cotton seed oil, and fish oil, \*\*\*\*, and beef tallow, etc. to be mentioned, and to use especially rapeseed hardened oil, for example, as the portion or all the hydrogenated fats and oils of 50 degrees C or more of such the melting points.

It can use as it is very preferably as the fats and oils for flies, and fats and oils for sprays, and also the fats-and-oils constituent of this invention adjusted as mentioned above can also be further used as shortening stock oil fat. Under the present circumstances, it can use as various additives usually used for the fats and oils for flies, the fats and oils for sprays, shortening stock oil fat, etc.

[Example]

Hereafter, the example of this invention is explained. In this example, the fats-and-oils constituent shown in the following table -1 was adjusted, and IV and AOM were measured about the fats and oils of each combination.

On the other hand, the fly test which lifts 30 yeast doughnuts to 800g of fats and oils in 180 degrees C and 6 hours was performed, and each rise and flavor (panel test by ten persons' panelist) of AV were investigated. Moreover, the lifted doughnut was left at 20 degrees C overnight, icing nature was observed and doubled, and the existence of a white color number was observed. Those results were shown in the following table -1. In addition, about the flavor test by the panelist, it evaluated in four stages as follows. That is, O shows that the fitness and \*\* of a defect and x are [ fitness and O ] very poor very.

Moreover, it evaluated in four stages about icing nature as well as a flavor test.

According to the result shown in Table -1, when high OREIKKU oil is used, it turns out to AV when performing fly as compared with other liquefied oils, flavor, icing nature, and whitening

that stability is very good.

[Effect of the Invention]

A taste is strong, and the fats-and-oils constituent of this invention has flavor, a taste milder than the conventional thing, etc., there is no hardening smell, when it uses as the fats and oils for flies, and fats and oils for sprays, the fats-and-oils constituent of this invention has the good oxidation stability of fats and oils, and whitening of the product by crystal generating of the fats and oils which fats and oils acid-number-went up, and adhered etc. is suppressed.

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TECHNICAL FIELD

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[Industrial Application]

Especially this invention relates to the fats-and-oils constituent suitable for the fats and oils for flies, the fats and oils for sprays, etc.

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EFFECT OF THE INVENTION

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[Effect of the Invention]

A taste is strong, and the fats-and-oils constituent of this invention has flavor, a taste milder than the conventional thing, etc., there is no hardening smell, when it uses as the fats and oils for flies, and fats and oils for sprays, the fats-and-oils constituent of this invention has the good oxidation stability of fats and oils, and whitening of the product by crystal generating of the fats and oils which fats and oils acid-number-went up, and adhered etc. is suppressed.

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TECHNICAL PROBLEM

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[Description of the Prior Art]

There is a thing given in JP,61-44120,B as the fats and oils for flies which used natural palm oil, and fats and oils for sprays. Fats and oils given [ this ] in an official report are 35 or less iodine value and the natural palm oil fractionation oil of 35 degrees C or less of melting points which have specific fatty acid composition. this thing -- a color tone good and flavor -- it has the features, like it is frank, and feels refreshed and there is no hardening smell, but on the other hand the crystal of fats and oils was what has the physical properties of the hard butter style, and has the problem of an oxidization rise distributing early at fly epidermis, coming out, and whitening on the occasion of the use as a fly oil or a spray oil

Therefore, even if it uses the purpose of this invention for the fats and oils for flies, the fats and oils for sprays, etc., it is to offer the fats-and-oils constituent with which whitening by an acid-number rise of fats and oils and the crystal of fats and oils was suppressed.

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MEANS

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[The means for solving a technical problem]

By this invention, it consists of 40 - 80% of melting point fractions in [ of 46 or less iodine value ] natural palm oil, and 60 - 20% of natural highness OREIKKU vegetable oil of iodine values 76-95, and an iodine value offers the polyunsaturated fatty acid more than the diene fatty acid in 42-75, and a composition fatty acid / 3 - 11% and solid-state fat content ] the fats-and-oils constituent characterized by being 10% or less at 10% or more and 30 degrees C at 30% or more

and 20 degrees C by 10 degrees C. Therefore, the above-mentioned purpose is attained.

The fats-and-oils constituent of this invention is explained in full detail below.

The melting point fraction in natural palm oil which is the first component of the fats-and-oils constituent of this invention is 3% or less of thing preferably 3.5% or less of diglyceride contents in 46 or less iodine value. If a color tone and flavor will become bad, stability will also get worse, if the iodine value of the melting point fraction in natural palm oil exceeds 46, and a diglyceride content exceeds 3.5%, the diglyceride of palm oil becomes [ unlike the diglyceride of a liquefied oil, / since there is much saturation acid / hydrolysis or a transition reaction ] easy to occur and is not desirable.

Furthermore, the above-mentioned melting point fraction in natural palm oil is 40 - 95% among the fats-and-oils constituent of this invention. A result from which it is not desirable, and an acid-number rise is remarkable when it exceeds 80%, a whitening phenomenon becomes easy to arise as a fly oil, and only what has not good flavor is obtained since it comes to cause a sugar crying phenomenon when the stability of a fats-and-oils constituent becomes bad, for example, a doughnut is lifted at less than 40% is brought, and it is a book.

Moreover, the iodine value of the natural highness OREIKKU vegetable oil which is the second component of the fats-and-oils constituent of this invention is vegetable oil of 76-95. That to which an iodine value exceeds 95 among these natural highness OREIKKU vegetable oil has stability and bad flavor, and an iodine value has little acid-number rise depressor effect less than 76.

Furthermore, it is bad unstable and the inside of the fats-and-oils constituent of this invention and the above-mentioned natural highness OREIKKU vegetable oil are a book, when it is 60 - 20%, and the whitening phenomenon like the above arises in a fats-and-oils constituent at less than 20%, and there is little acid-number depressor effect and it exceeds 60%.

As the above-mentioned natural highness OREIKKU vegetable oil used for the fats-and-oils constituent of this invention, high OREIKKU sunflower oil, high OREIKKU safflower oil, a high OREIKKUNATANE oil, etc. are desirable, and especially high OREIKKU sunflower oil is desirable.

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It is desirable for the hardened oil of animal oil, such as vegetable oil, such as a NATANE oil, soybean oil, a cone oil, and cotton seed oil, and fish oil, \*\*\*\*, and beef tallow, etc. to be mentioned, and to use especially NATANE hardened oil, for example, as the portion or all the hydrogenated fats and oils of 50 degrees C or more of such the melting points.

It can use as it is very preferably as the fats and oils for flies, and fats and oils for sprays, and also the fats-and-oils constituent of this invention adjusted as mentioned above can also be further used as shortening stock oil fat. Under the present circumstances, it can use as various additives usually used for the fats and oils for flies, the fats and oils for sprays, shortening stock oil fat, etc.

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## EXAMPLE

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### [Example]

Hereafter, the example of this invention is explained. In this example, the fats-and-oils constituent shown in the following table -1 was adjusted, and IV and AOM were measured about the fats and oils of each combination.

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